Remote Sensing of Environment

An Interdisciplinary Journal

VOLUME 40, 1992

Contents

B. A. M. Bouman and D. Uenk
Crop Classification Possibilities with Radar in ERS-1 and JERS-1 Configuration 1

S. Paloscia and P. Pampaloni
Microwave Vegetation Indexes for Detecting Biomass and Water Conditions of Agricultural Crops 15

C. Ottlé and D. Vidal-Madjar
Estimation of Land Surface Temperature with NOAA9 Data 27

M. Hugh-Jones, N. Barre, G. Nelson, K. Wehnes, J. Warner, J. Garvin, and G. Garris
Landsat-TM Identification of *Amblyomma variegatum* (Acari: Ixodidae) Habitats in Guadeloupe 43

R. M. Mitchell, D. M. O'Brien, and B. W. Forgan
Calibration of the NOAA AVHRR Shortwave Channels Using Split Pass Imagery: I. Pilot Study 57

Zhimin Chen, Paul J. Curran, and Jim D. Hansom
Derivative Reflectance Spectroscopy to Estimate Suspended Sediment Concentration 67

Lawrence W. Harding, Jr., Eric C. Itsweire, and Wayne E. Esaias
Determination of Phytoplankton Chlorophyll Concentrations in the Chesapeake Bay with Aircraft Remote Sensing 79

M. Raffy
Change of Scale in Models of Remote Sensing: A General Method for Spatialization of Models 101

Contents continued

Claudio Conese and Fabio Maselli
Use of Error Matrices to Improve Area Estimates with Maximum Likelihood Classification Procedures 113

Donald G. Leckie, Xiaoping Yuan, Donald P. Ostaff, Harald Piene, and D. A. MacLean
Analysis of High Resolution Multispectral MEIS Imagery for Spruce Budworm Damage Assessment on a Single Tree Basis 125

Peng Gong, Danielle J. Marceau, and Philip J. Howarth
A Comparison of Spatial Feature Extraction Algorithms for Land-Use Classification with SPOT HRV Data 137

E. Zilioli, M. A. Gomarasca, and R. Tomasoni
Application of Terrestrial Thermography to the Detection of Waste-Disposal Sites 153

James J. Simpson
Image Masking Using Polygon Fills and Morphological Transformations 161

K. O. Pope, E. J. Sheffner, K. J. Linthicum, C. L. Bailey, T. M. Logan, E. S. Kasischke, K. Birney, A. R. Njogu, and C. R. Roberts
Identification of Central Kenyan Rift Valley Fever Virus Vector Habitats with Landsat TM and Evaluation of Their Flooding Status with Airborne Imaging Radar 185

Duane T. Eppler and William E. Full
Polynomial Trend Surface Analysis Applied to AVHRR Images to Improve Definition of Arctic Leads 197

Agnès Bégué
Modeling Hemispherical and Directional Radiative Fluxes in Regular-Clumped Canopies 219

Ray D. Jackson, Thomas R. Clarke, and M. Susan Moran
Bidirectional Calibration Results for 11 Spectralon and 16 $BaSO_4$ Reference Reflectance Panels 231

Errata 241

VOLUME 41, 1992

Contents

Warren B. Cohen and Thomas A. Spies
Estimating Structural Attributes of Douglas-Fir/Western Hemlock Forest Stands from Landsat and SPOT Imagery 1

N. Che and J. C. Price
Survey of Radiometric Calibration Results and Methods for Visible and Near Infrared Channels of NOAA-7, -9, and -11 AVHRRs 19

John C. Price
Estimating Vegetation Amount from Visible and Near Infrared Reflectances 29

J. A. Gamon, J. Peñuelas, and C. B. Field
A Narrow-Waveband Spectral Index That Tracks Diurnal Changes in Photosynthetic Efficiency 35

P. M. Atkinson, R. Webster, and P. J. Curran
Cokriging with Ground-Based Radiometry 45

D. J. Major, G. B. Schaalje, C. Wiegand, and B. L. Blad
Accuracy and Sensitivity Analyses of SAIL Model-Predicted Reflectance of Maize 61

A. J. Richardson, C. L. Wiegand, D. F. Wanjura, D. Dusek, and J. L. Steiner
Multisite Analyses of Spectral-Biophysical Data for Sorghum 71

Gérard Guyot
Physical Measurements and Signatures in Remote Sensing 83

G. Asrar, R. B. Myneni, and B. J. Choudhury
Spatial Heterogeneity in Vegetation Canopies and Remote Sensing of Absorbed Photosynthetically Active Radiation: A Modeling Study 85

R. B. Myneni, G. Asrar, and F. G. Hall
A Three-Dimensional Radiative Transfer Method for Optical Remote Sensing of Vegetated Land Surfaces 105

S. Jacquemoud, F. Baret, and J. F. Hanocq
Modeling Spectral and Bidirectional Soil Reflectance 123

F. Baret, S. Jacquemoud, G. Guyot, and C. Leprieur
Modeled Analysis of the Biophysical Nature of Spectral Shifts and Comparison with Information Content of Broad Bands 133

A. R. Huete, G. Hua, J. Qi, A. Chehbouni, and W. J. D. van Leeuwen
Normalization of Multidirectional Red and NIR Reflectances with the SAVI 143

Bernard Pinty and Michel M. Verstraete
On the Design and Validation of Surface Bidirectional Reflectance and Albedo Models 155

M. Susan Moran, Ray D. Jackson, Philip N. Slater, and Philippe M. Teillet
Evaluation of Simplified Procedures for Retrieval of Land Surface Reflectance Factors from Satellite Sensor Output 169

P. M. Teillet
An Algorithm for the Radiometric and Atmospheric Correction of AVHRR Data in the Solar Reflective Channels 185

Yann H. Kerr, Jean Pierre Lagouarde, and Jacques Imbernon
Accurate Land Surface Temperature Retrieval from AVHRR Data with Use of an Improved Split Window Algorithm 197

A. G. Dekker, T. J. Malthus, M. M. Wijnen, and E. Seyhan
The Effect of Spectral Bandwidth and Positioning on the Spectral Signature Analysis of Inland Waters 211

R. Santer, X. F. Gu, G. Guyot, J. L. Deuzé, C. Devaux, E. Vermote, and M. Verbrugghe
SPOT Calibration at the La Crau Test Site (France) 227

Albert Olioso, Maurice Méthy, and Bernard Lacaze
Simulation of Canopy Fluorescence as a Function of Canopy Structure and Leaf Fluorescence 239

Volume Contents